REMARKS

Amendments

Claims 4, 18, and 49 are amended to state that the cancer is leukemia selected from a specified group. These amendments do not narrow the scope of the claims, and no new matter is added.

Obviousness-Type Double Patenting Rejections

Claims 1, 3-15, and 17-60 are rejected on grounds of obviousness-type double patenting in view of certain claims of Gourdeau (US 6,630,480) in combination with Gourdeau (US 6,800,639), Chu et al. (US 5,817,667), and the article by De Bono et al. This rejection is respectfully traversed.

US '480 has two independent claims. Independent claim 1 recites a method or treating a patient having chronic myelogenous leukemia or acute myelogenous wherein the patient has been previously treated with Ara-C. Independent claim 21 recites a method of treating a patient suffering from chronic myelogenous leukemia or acute myelogenous leukemia, wherein the leukemia is non-responsive to treatment with other chemotherapeutic agents.

None of the claims of US '480 recite administration by continuous infusion, let alone continuous infusion for at least 72 hours. The only description of administration recited in the claims is the administration of effective amounts (claims 1 and 21) and specific amount ranges and dosages (see claims 14-20 and 30-36).

As the Examiner is aware, the analysis in making an obviousness-type double patenting rejection is whether the **claims** of the patent establish that the invention claimed in the application is an obvious variant. Thus, in this analysis, the disclosure of the patent is not permitted to be used as prior art. See, e.g., MPEP 804 and *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 23 USPQ2d 1839 (Fed. Cir. 1992). In the rejection, the

Examiner argues that it is permissible to use the disclosure of US '480 as a dictionary to define what is meant in the claims by effective amount. In support of this assertion, the Examiner cites MPEP 2111.01.

However, contrary to the assertion in the Rejection, it is unnecessary to go to the specification to define effective amount. As mentioned above, claims 14-20 and 30-36 provide information for one skilled in the art to interpret effective amounts. In any event, even if it were permissible to refer to the specification to define effective amounts, one does not need to refer to the disclosure on modes of administration to determine effective amounts.

The rejection refers to the study discussed in Example 2 of US '480. In this study, 12 patients with leukemia, that had been previously treated with Ara-C, were treated with daily doses of troxacitabine at 0.72 mg/m^2 (4 patients), 1.08 mg/m^2 (5 patients), and 1.62 mg/m^2 (3 patients). These doses were given as a daily infusion **over 30 minutes** for 5 consecutive days

In the rejection, it is argued that this administration of "troxacitabine for 5 consecutive days, clearly overlaps with the limitation of 3 to 7 consecutive days as recited in the instant claims." This assertion is incorrect. All of applicants' claims recite continuous infusion for a period of **at least 72 hours**. Conversely, in the study described Example 2 of US '480, the **infusions were only for 30 minutes**.

At the bottom of page 5 of the Officer Action, it is argued that one skilled in the art would surmise that effective amounts of troxacitabine as recited in the claims of US '480, giving the term its broadest reasonable interpretation, encompasses daily 30 minute infusions for 5 days. However, even if correct, this assertion provides no rationale as to why one of ordinary skill in the art, upon reading the claims of US '480, would be lead to select an administration regime in which a patient was administered troxacitabine by continuous infusion for a period of **at least 72 hours,** i.e., over 140 times as long as the 30 minute infusions of US '480. Thus, the rejection fails to establish obviousness of applicants' claimed invention.

Gourdeau et al. (US '036) is a divisional of Gourdeau et al. (US '480). The instant application, as well as US '036 and US '480, are commonly assigned. Furthermore, the instant application and both US '036 and US '480 were commonly assigned at the time the invention of the instant application was made. Thus, US '480 is not effective prior art for obviousness determinations under 35 USC 103(a). The Examiner cites no authority that suggests that, if US '480 is ineffective prior art for obviousness determinations under 35 USC 103(a), it can still be used as a secondary reference in an obviousness-type double patenting rejection.

In any event, the rejection refers to the description in certain claims of US '036 of using troxacitabine in combination with doxorubicin or other agents. Such disclosure does not suggest treating cancer in a patient by administering troxacitabine or a pharmaceutically acceptable salt thereof by continuous infusion for a period of at least 72 hours.

Gourdeau et al. (US '639) is cited in the rejection for teaching a method of treating pancreatic cancer by administering troxacitabine in combination with gemcitabine. The instant application and US '639 are commonly assigned. Furthermore, the instant application and US '639 were commonly assigned at the time the invention of the instant application was made. Thus, US '639 is not effective prior art for obviousness determinations under 35 USC 103(a). The Examiner cites no authority that suggests that, if US '639 is ineffective prior art for obviousness determinations under 35 USC 103(a), it can still be used as a secondary reference in an obviousness-type double patenting rejection.

In any event, the rejection refers to the disclosure in US '639 of using troxacitabine in combination with gemcitabine. Such disclosure does not suggest treating cancer in a patient by administering troxacitabine or a pharmaceutically acceptable salt thereof by continuous infusion for a period of at least 72 hours.

With regards to Chu et al. (US '667) it is argued in the rejection that this patent discloses

the treatment of cancer broadly and that this encompasses the treatment of, for example, renal cancer. Regardless of this assertion, US '667 does not disclose administering troxacitabine or a pharmaceutically acceptable salt thereof by infusion, let alone continuous infusion, let alone continuous infusion for a period of at least 72 hours.

Finally, the rejection refers to the disclosure of the 2002 abstract by De Bono et al. (see also the discussion of De Bono et al. at page 2 of applicants' specification). In the rejection, it is argued that the De Bono et al. abstract teaches administering troxacitabine as a daily **30 minute infusion** for five days every 3 to 4 weeks. However, does not provide any rationale that would lead one of ordinary skill in the art to select an administration regime in which a patient was administered troxacitabine by **continuous infusion for a period of at least 72 hours.**

In view of the above remarks, it is respectfully submitted that the claims of Gourdeau (US 6,630,480), taken alone or in combination with the disclosures of Gourdeau (US 6,800,639), Chu et al. (US 5,817,667), and/or the article by De Bono et al., fails to render obvious applicants' claimed invention. Withdrawal of the rejection is respectfully requested.

It is noted that at the end of this rejection (see the top of page 8 of the Office Action), the Examiner asserts provisional rejection in view of the claims of Serial No. 10/824,563 (another divisional of US '480), claims of Serial No. 10/107,795 (now abandoned), or claims of Serial No. 10/826,960 (now US 6,645,972), in each in view of Gourdeau (US 6,800,639), Chu et al. (US 5,817,667), and the article by De Bono et al. In this provisional rejection, it is asserted that the claims are rejected for essentially the same reasons asserted in the rejection based on US '480.

These rejections are traversed for the reasons stated above. Withdrawal of the rejections is respectfully requested.

Rejection under 35 USC §112, second paragraph

Claims 1, 3-15, and 17-60 are rejected on grounds of alleged indefiniteness. This rejection is respectfully traversed.

In the rejection, it is asserted that the recitation of "effective amount" in independent claim 1 is indefinite in that it is unclear whether the amount is effective to reduce tumor burden or effective to inhibit viral replication. Similar arguments are made regarding the recitation of effective amount in independent claims 8 and 13. Applicants disagree that the claim language would be indefinite to one of ordinary skill in the art.

Claims 1, 8, and 13 all expressly recite methods "for the treatment of **cancer** within a patient." The language of the claims does not refer to any antiviral activity or treatment. One of ordinary skill in the art, upon reading the claim language in its entirety, would recognize that the effective amounts are amounts effective for the treatment of cancer.

As for claims 4, 18, and 19, applicants respectfully submit that the language of these claims was not indefinite since, regardless of how the Examiner characterized the language, one of ordinary skill in the art would still recognize that the claims recite that the patient had acute myelogenous leukemia, chronic myelogenous leukemia, chronic myelogenous leukemia in blastic phase, or refractory myelodysplastic syndromes. In any event, the claims are amended to make the language even more explicit.

In view of the above remarks, withdrawal of the rejection is respectfully requested.

Rejection under 35 USC §103(a)

Claims 1, 3-15, and 17-60 are rejected as allegedly being obvious in view of the abstract by De Bono et al. in combination with Chu et al. (US 5,817,667) and Benet et al. This rejection is respectfully traversed.

For the reasons discussed above, withdrawal of the rejections under 35 USC §102(a) and 35 USC §103 is respectfully requested.

The De Bono abstract describes a Phase I study wherein patients were administered troxacitabine "as a 30-minute IV infusion daily for 5 days." In the rejection, it is acknowledged that applicants' independent claims recite "continuous infusion for a period of at least 72 hours." The Examiner states that this language "could" be construed to mean a continuous infusion over a period of at least 72 hours. Applicants respectfully submit that the Examiner fails to explain how this language can be construed any other way. The Examiner alleges that this language, "when given its broadest reasonable literal interpretation, encompasses any continuous infusion." This is a conclusory statement. No rationale is presented as to why one of ordinary skill in the art would construe this language in the manner suggested by the Examiner.

The Examiner's argument regarding half-lives for drug elimination merely refers to an asserted "continuous" amount of drug in the bloodstream. The argument does not provide any reason why one would interpret 30 minutes to be the same as at least 72 hours. The rejection presents no rationale as to why one of ordinary skill in the art would conclude that a 30 minute infusion satisfies a claim limitation of continuous infusion for at least 72 hours.

With regards to the disclosure by Chu et al. (US '667), this disclosure does not mention infusion, or continuous infusion, let alone continuous infusion for at least 72 hours. Thus, US '667 provides no rationale for modifying the disclosure of De Bono in such a manner as to arrive at applicants' claimed dosage regime.

The arguments in the rejection regarding the disclosure of Benet et al. suggest that it is possible to manipulate infusion rate to achieve or maintain certain concentration of a drug. This

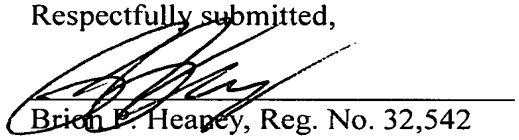
is a best an assertion of obvious to try, which is an impermissible rationale for obviousness under 35 USC 103.

In any event, contrary to the assertions in the rejection, **Benet et al. do not mention the administration by infusion.** Moreover, Benet et al. provide no rationale that would lead one skilled in the art to replace a dosage regime involving daily 30-minute infusions with a continuous infusion for a period of at least 72 hours.

In view of the above remarks, it is respectfully submitted that De Bono et al., taken alone or in combination with US '667 and/or Benet et al., fails to render obvious applicants' claimed invention. Withdrawal of the rejection is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Brian P. Heaney, Reg. No. 32,542
Attorney for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

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